

CLAIMS:

1. A hammer assembly including:

- a housing;
- a hammer received in the housing and
- a drive mechanism for reciprocating the hammer, wherein

the hammer is substantially elongated with first and second tool ends located at opposing longitudinal ends of the hammer, each tool end capable of extending through a lower opening end in the housing to strike the working surface, the hammer assembly characterised in that the hammer is capable of being removed from the housing, reversed and replaced in the housing, enabling either of the first and second tool ends orientated to extend through the lower opening end in the housing to be interchanged.

2. The hammer assembly as claimed in claim 1 wherein the hammer includes at least one protrusion on each of two opposing hammer faces adapted for engagement with the drive mechanism.
3. The hammer assembly as claimed in claim 1 wherein the hammer includes a protrusion thereon and the drive mechanism includes a loop of chain having at least one dog fixed thereto and a motor for rotating the chain, the dog abutting the protrusion to lift the hammer away from the opening end of the housing.
4. The hammer assembly as claimed in any one of claims 1-3, wherein the housing is configured for attachment to an articulated arm of an excavator or other machine and the drive mechanism is enclosed within the housing.
5. The hammer assembly as claimed in any one of claims 1 - 4, further including a cushion fixed near the opening end of the housing for engaging the protrusion.
6. The hammer assembly as claimed in any one of claims 1 - 4, wherein the hammer is adapted to drop under gravity toward the opening end of the housing before striking the working surface.

7. The hammer assembly as claimed in any one of claims 1 - 4, wherein the drive mechanism includes means for engaging and driving the hammer from the housing to strike the working surface.
8. The hammer assembly as claimed in any one of claims 1 - 4, wherein the hammer is propelled to strike the working surface by gravity and by engagement with the drive mechanism.
9. The hammer assembly as claimed in any one of the preceding claims wherein the hammer is cylindrical.
10. The hammer assembly as claimed in any one of claims 1 to 7 wherein the hammer is multifaceted.
11. The hammer assembly as claimed in any one of the preceding claims wherein the opposing hammer tool ends are non-identical.
12. The hammer assembly as claimed in any one of the preceding claims wherein the tool ends are configured as a substantially flat surface, a blade, a substantially convex surface, substantially concave surface, or a spike.
13. The hammer assembly as claimed in claim 1, wherein the drive mechanism configured to lift the hammer includes at least two sprockets, and at least one dog and a chain.
14. The hammer assembly as claimed in claim 13 wherein a dog is attached to a chain and is adapted to engage the protrusion.
15. The hammer assembly as claimed in any one of claims 13 or 14, wherein a chain is adapted to be rotated around said at least two sprockets.
16. The hammer assembly as claimed in any one of claims 13 - 15, wherein the sprockets, dog and chain are aligned substantially parallel to the hammer.
17. The hammer assembly as claimed in any one of claims 13 - 15, wherein the sprockets, dog and chain are aligned substantially perpendicular to the hammer.

18. The hammer assembly as claimed in any one of claims 13 – 17, further including a connecting apparatus between the hammer and the hammer housing.
19. The hammer assembly as claimed in any one of claims 13 – 18, wherein the connecting apparatus is capable of elastic deformation.
20. The hammer assembly as claimed in any one of claims 13 – 19, wherein the connecting apparatus is detachable.
21. A method of interchanging the tool ends on a hammer assembly as claimed in any of the previous claims, said method characterised by the steps of:
 - withdrawing the hammer from the housing,
 - reversing the orientation of the hammer, and
 - reinserting the hammer into the housing.